

The Journal of Irreproducible Results®

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Volume 37, Number 3 May/June 1992

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**Heat Death of the Universe
Taxonomy of Ceiling Tiles
Measuring the Snail's Pace**

**Creativity and Sex
New Approaches to Smoke
The Playtex Nipple Man**



A New Aspect of Fractal Self-Similarity (see page 4)



The Journal of Irreproducible Results

Official Journal of the Society for Basic Irreproducible Research

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The Journal of Irreproducible Results (ISSN 0022-2038) is published six times a year (Jan./Feb., Mar./Apr., May/June, July/Aug., Sept./Oct., Nov./Dec.) by Blackwell Scientific Publications, Inc., Three Cambridge Center, Cambridge, Massachusetts 02142.

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Subscription rates: In the U.S., \$15.00 for individuals, \$35.00 for institutions. In Canada and Mexico, \$20.00 for individuals, \$40.00 for institutions. Overseas, \$35.00 for individuals, \$55.00 for institutions. To subscribe by phone: (800) 759-6102.

Second class postage paid at Boston, MA, and additional mailing offices. **Postmaster:** Send address changes for *Journal of Irreproducible Results*, Blackwell Scientific Publications, Inc., Three Cambridge Center, Cambridge, MA 02142.

Change of Address: Send to publisher six weeks prior to move; enclose present mailing label with change of address.

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Scientific Gossip

Contains 100% gossip from concentrate



compiled by Stephen Drew

Many favor porridge

Mystery Bursts

Astronomers are deeply puzzled by the bursts of gamma rays that bombard the earth. New instruments reveal that the bursts are distributed across all parts of the sky. This contradicts all previous theories as to the source of the high-energy radiation. Astronomers are calling this one of the greatest astronomical mysteries of the century, with the exception of National Space Council Chairman J. Danforth Quayle.

The Breakfast Battle

To some, the answer is gruel. Many favor porridge. Others believe that hot cereal will win the day. A three-year, \$30 million public nutrition research project has been proposed to the United Nations. It should settle the longstanding dispute about which of these foodstuffs the world's people should eat for breakfast.

Creativity and Sex

The recent Canadian study "Low-Level Sexual Stimulation Spurs Creativity" continues to inspire researchers in many fields. One new study under way in Calgary is examining whether the phenomenon occurs in gerbils as

well as chimpanzees. A follow-up study may involve human beings.

Cuban Missile Hoax?

In 1962 the Soviet Union and the United States flirted with nuclear war over the presence of nuclear weapons in Cuba. Now Gerard Piel, publisher emeritus of *Scientific American* and a noted historian, is advancing the theory that the missiles had no nuclear warheads and that President Kennedy knew it. Piel has been approached to write a book on the subject.

Viking Artifacts in New Zealand?

— details in section 2

Oily Economics

Within ten years, most of the petroleum used by the developed countries will come from genetically engineered crops rather than from wells. The biotechnology (developed at Ohio State University and elsewhere) has been nearly ready for several years now, yet none of these plants are being grown commercially. Conspiracy buffs have speculated that dark industrial and political forces were

responsible for suppressing the research.

In fact, it appears that simple economics is responsible for the delay. Petroleum, regardless of its source, needs to be processed and distributed on a massive scale. The major oil companies, which already own such a system, decided to fund the remaining necessary research only after they have purchased enough farmland to be assured of having a viable business after the switch is made from "fossil fuel" to "agrifuel" petroleum. It is estimated that if they continue purchasing farmland at the current rate, by 1997 these oil companies will own two thirds of all U.S. farmland — just enough to make the changeover.

Knocking Out Insomnia

A new type of bed is able to cure insomnia by exposing the sufferer to carefully chosen physical stimuli. Different levels of stimulation can be selected, including Sheep, Waterfall, Howling Wind, Sledgehammer, and — for the most difficult cases — Megaton.

Total Quality: Maybe Not

Former Reagan advisor

Norge Grover is finishing a book in which she disproves a shibboleth of modern economics: namely, that the best way to protect one's position in the marketplace is to make better products than the competition. Grover argues that the opposite is in fact the case.

Dietary Adjustment

The International Association of Health Food Advocates is about to rescind its Basic Nutritional Recommendations for Adults. The organization will urge that people stop following the popular BLTNB ("Barley, Liver, and Tea, and Nothing But") diet, which has been a central aspect of the recommendations for nearly 10 years. Instead, it will urge the public to adopt an AYFMNB ("Asparagus, Yogurt, and Fish Meal, and Nothing But) diet.

Schizophrenics Anonymous

Researchers at the University of Sapporo are attempting to use fuzzy logic to solve the "schizophrenics anonymous problem." This old chestnut of a mathematical puzzle can be stated in the form of an amorphous riddle: How many schizophrenics does it take?

Nobel Thoughts

Profound Insights of the Laureates

Marc Abrahams



Simon van der Meer received the Nobel Prize for Physics in 1983 for his contributions to the discovery of the W and Z subatomic particles. A native of the Netherlands, he now resides in a small town outside Geneva. We spoke with him via the kind assistance of the intrepid Dutch journalist Herbert Blankesteijn.

What is your opinion about chewing gum?

Chewing gum? That's very useful to stick things together. If you have a hole in your radiator, you can plug it with chewing gum.

Does a brisk cup of tea stimulate the thought processes?

No, I don't think so.

How about eating fish?

I'm not so enthusiastic about that. I don't do it too often.

Do you have any advice for young people who are entering the field?

What I would recommend to them is, if they have some idea — however crazy it is — they should check up on it. Once in a hundred times it will turn out to be a good idea.

Clarification

The data items listed in "Sleep Research Update" (JIR 36:6) were not presented in chronological order. Also, although LD slept with five of the subjects (BBJ, CD, GB, HT, and CK) repeatedly during the period of the study, each of those subjects was treated as a single item. This was, and is, confusing.

Chaotic Faces: A New Aspect of Fractal Self-Similarity

Dan Tandberg, M.D.

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**When one
considers that
fractals are
infinitely
complex
geometric
objects, this
phenomenon
seems less
surprising**

We report here the discovery, within certain fractals, of representations of human faces exhibiting extraordinary self-similarity to the computer operator's own.

Background

Chaos¹ theory is a contemporary branch of science and mathematics grounded in the discovery that orderly deterministic systems with only a few elements can generate random behavior. It has proved remarkably useful for modeling many historically unanalyzable nonlinear processes such as population variation in ecosystems, turbulent flow of fluids, the structure and function of biological tissues, and even the weather.²

Intimately associated with chaos theory are "fractals," astonishingly beautiful geometric objects that have nonintegral dimension.³ These figures can be thought of as graphical representations of nonlinear dynamical systems in phase space.^{4,5} They are usually generated with a computer by repeating relatively simple calculations again and again, substituting results of each iteration back into the original equation.

Fractals have three important characteristics. First, they exhibit sensitive dependence upon initial conditions.⁶ A change in the last decimal place of a single input parameter results in a fractal object with an entirely different appearance. A second feature is universality.^{7,8} Certain attributes of fractals are independent of the class of generating function

used to produce them. Third, they are, quite literally, infinitely complex. As one looks at a fractal object with increasing magnification, more and more detail is revealed without apparent limit, yet the characteristic features of the object are maintained throughout.⁹ This invariance across scale is termed *self-similarity*.

The wide availability of fast, inexpensive microprocessors, high-resolution video monitors, and superb software for creating fractals has brought experimentation with these objects within the easy reach of almost anyone. Even nonprofessionals have become acquainted with the constructs through art books,¹⁰ popular magazines,¹¹ and even calendars.¹²

Methods

Fractal objects were generated with an Intel 33 MHz 80386-based microcomputer. An ITT-3C87 floating-point math coprocessor was used to increase the calculation speed. A 640 x 480 pixel video monitor with 16-level grayscale of 16-color palette was used for image display. Fractal images were generated with FRACTINT,¹³ version 16.11, which provides for rapid alteration of image position as well as variation in scale. Photographs were made with a Model CI-3000 Polaroid Digital Palette Film Recorder using Ektachrome ASA 200 35 mm color transparency film and commercial processing.

The Mandelbrot set was generated by using the standard iterative algorithm in which

c = the pixel coordinates, and

$$z_{n+1} = (z_n)^2 + c$$

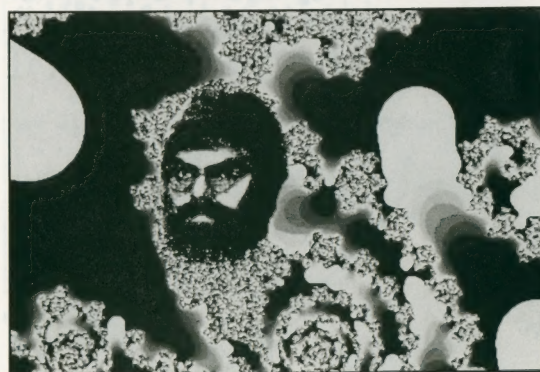
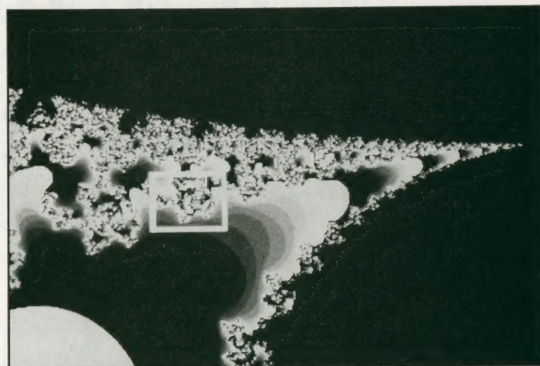
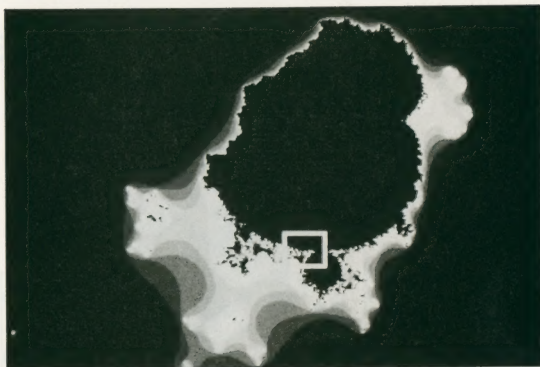
where z and c are complex numbers of the form $a + bi$. A maximum of 2048 iterations were used for the generation of each pixel on the screen.

The initial conditions for each subject's fractal object were generated in the following manner: The real part of z_0 consisted of a decimal point followed by the digits of the subjects's birth date and time. The imaginary part of z_0 was formed by placing a decimal point at the beginning of the subject's social security number. Each subject was given brief instructions on operating the software and then allowed unlimited time to explore his or her fractal by repeated magnification and linear transformation in the complex plane until one or more self-similar facial objects became clearly discernible. Each operator searched his or her object three times using the gray-scale palette and three times using color, each search on a separate day.

This study was reviewed and approved by our institutional review board. All subjects participated voluntarily and gave their informed consent in writing.

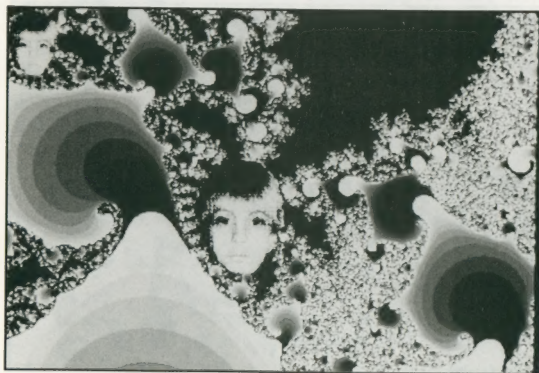
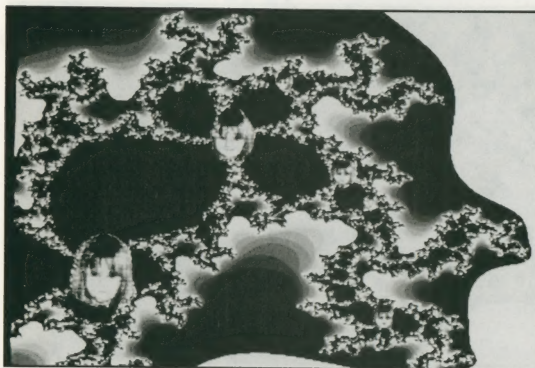
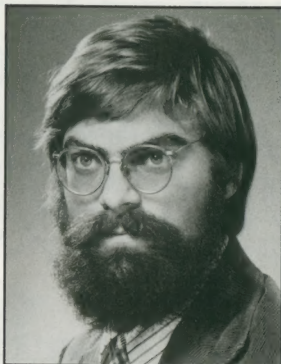
Results

Three subjects aged 45, 4, and 7 years participated in the study. All located at least one self-similar facial object in each of the three gray-scale searches, but no chaotic face was identified in any search using color. Mean



Figures 1, 2, and 3

Figures 4, 5, and 6



times for subject's detection of the first facial image were 6.5, 0.2, and 0.8 hours. The time required to first perceive a self-similar face was strongly associated with subject age ($r = 0.99$, $p = 0.013$).

Figure 1 shows the Mandelbrot-type fractal generated using subject 1's birth date and time and social security number to create the initial value for z_0 . Magnification of the boxed area in Figure 1 produces Figure 2, and subsequent magnification yields Figure 3. Note the extraordinary similarity of the facial object in Figure 3 with the photograph of the subject himself (Figure 4). Figures 5 and 6 show the self-similar facial objects located by subjects 2 and 3; observe that multiple facial images occur in both.

Discussion

The finding of self-similar facial representations within fractals generated with operator-associated initial conditions was at first quite startling. However, when one considers that fractals are infinitely complex geometric objects, this phenomenon seems less surprising.

The inability of any subject to locate chaotic faces when using color was unanticipated. However, conversion to the color palette rendered easily identifiable gray-scale faces completely imperceptible, even if one watched as the transformation from gray to color was taking place. This, together with the fact that almost all modern investigators use color palettes, may explain why this phenomenon has not been previously appreciated. Further work is under way to learn whether this new aspect of self-similarity occurs universally.

Acknowledgments

The technical support provided by Marta Sherbring and Kevin Troutman is gratefully acknowledged. Special thanks to David Sklar and Alan Firestone for their insight and encouragement.

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A Taxonomy of Ceiling Tiles

David Harris

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The author has conducted an exhaustive research project to classify and analyze species of ceiling tiles found at the Sherman E. Burroughs High School.

Observations

I identified three fundamental species of ceiling tiles at the locale of research. The first, which I have named *Tileus familiaris*, is pictured in Figure 1. It is the most common type, found in virtually every hall of the school. The holes are arranged on a regular grid. Each tile has exactly 293 holes, 167 small and 126 large. Thus the number of holes on an undamaged classroom ceiling may be calculated by using either integral calculus or multiplication. The second species, *Tileus irregularis*, is the dominant form of ceiling tile in the alternate ecosystem in N-Hall. The holes are similar in shape and size to those of *Tileus familiaris* but are placed on an irregular grid that baffles elementary counting approaches. The third and least common species of ceiling tile is *Tileus replacementus*. This species has much smaller holes than either of the aforementioned ones and is further distinguished by a slightly off-white coloration. *Tileus replacementus* appears in some locales in N-Hall, where it has been used to replace old tiles. However, this species is relatively rare and will be ignored for the purpose of the remaining discussion.

The standard *Tileus familiaris* or *Tileus irregularis* is an equilateral rectangle, approximately 1 ft² in area. At first glance, four different subspecies, with different arrangements of holes, might be thought to exist, but more careful study reveals that these four pheno-

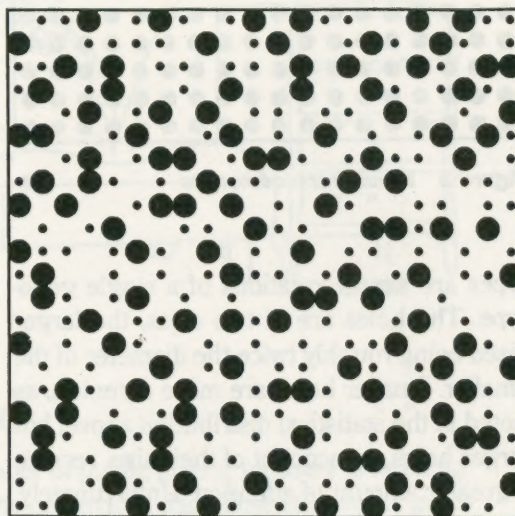


Figure 1 *Tileus familiaris*

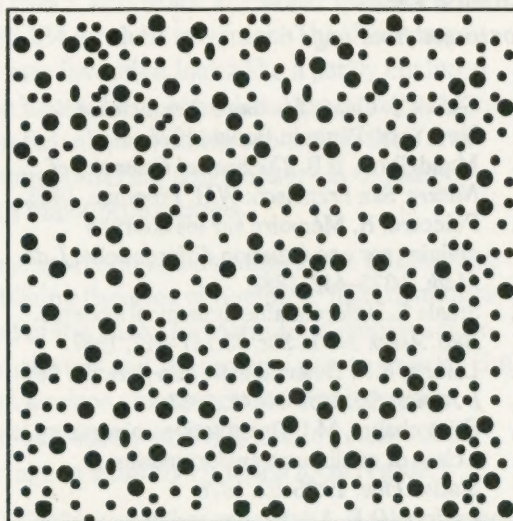


Figure 2 *Tileus irregularis*

The holes are of two sizes, the larger sized being roughly twice the diameter of the smaller

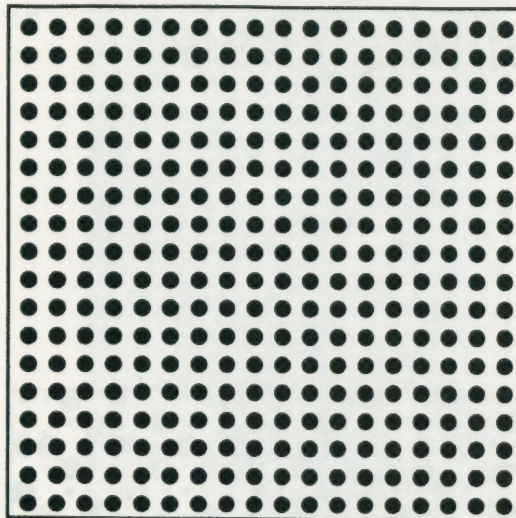


Figure 3 *Tileus replacementus*

types are simple rotations of a single genotype. The holes are of two sizes, the larger sized being roughly twice the diameter of the smaller. Smaller holes are more common, as noted in the statistical distribution above, but larger holes, on account of their size, receive a greater amount of attention. Unfortunately, the holes of *Tileus irregularis* are scattered in

groups that might initially appear to be regular, but in actuality are not arranged in straight rows and columns.

Two other physical characteristics of ceiling tiles attract the attention of student observers. Careful inspection of tiles located directly overhead reveals that many holes are not fully punched out. Also, many of the tiles, especially in N-Hall, show discolorations, as if an irate teacher had once thrown coffee at the ceiling.

Conclusion

This report contains a detailed description of three species of ceiling tiles, *Tileus familiaris*, *T. irregularis*, and *T. replacementus*. Using the taxonomy developed herein, diligent researchers at other institutions should be able to extend this study to categorize all species of ceiling tiles found in the world. With such information at hand, the scientific community will be able to better understand that which has hitherto always been over our heads and may make rational decisions about preserving endangered species of tiles and promoting diversity in ceilings so that one day we may better understand the diversity of humankind.

Chaotic Faces

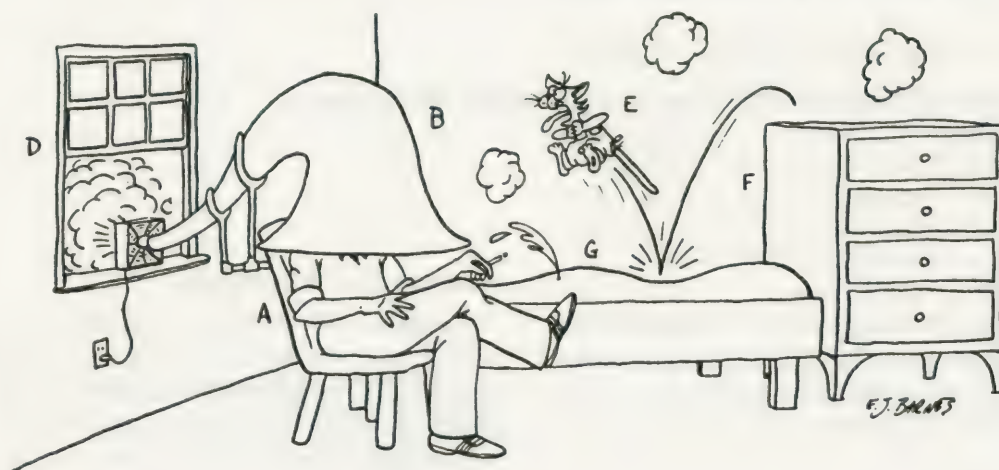
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Technology Update

An inside glimpse at what's new in emerging technologies

by Stephen Drew

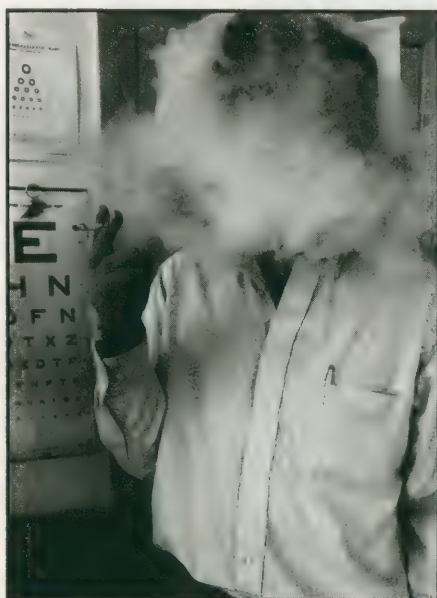


New Approaches to Smoke

With cigarette smoking banned in a growing number of public places, industry is working feverishly to produce a safe haven for smokers who crave their daily dose of gaseous gusto.

Many of these efforts, serious as they are, recall jestful fancies of yesteryear. The cartoon depicted here appeared in a past issue of the *Journal of Irreproducible Results*. A similar idea for a "smoker's booth" is described in the "Patents" column of the February 8, 1992, issue of *The New York Times*. Joseph S. Hofstra, Ronald Karaskiewicz, and Mark R. Fischer of Albuquerque, New Mexico, were awarded U.S. patent #5,085,134 for their invention. The *Times* says

that "the new invention looks like a partly enclosed telephone booth, but it provides what amounts to an air screen that allows smokers to satisfy their cravings without bothering non-smokers in the same room with malodorous fumes."



A different approach is illustrated in the photograph at left. Utilizing theories of nonlinear fluid dynamics developed at the Santa Fe Institute, it employs inexpensive materials and requires no power source. The shape and surface characteristics of this passive device induce warm, smoky gases to confine their meanderings to a tightly confined local region.

Dr. Eric Hamilton, the inventor of the passive device and promulgator of the chaotic spontaneous fluid flow theories upon which it is based, predicts that commercial versions will become available once he overcomes certain deficiencies in the design.

The shape and surface characteristics of this passive device induce warm, smoky gases to confine their meanderings to a tightly confined local region

A Calculation of the Time Remaining Until the Heat Death of the Universe

Marina Frants and C.O. Author

Massachusetts Institute of Technology, Cambridge, Massachusetts

**The size of the
observable
universe is
 1×10^{24}
square miles**

Abstract

The time remaining until the heat death of the universe is calculated by using a small model of the universe — namely, an office desk — as a basis for calculation.

Background

The Second Law of Thermodynamics states that the entropy, or disorder, of a closed system always increases until a maximum-entropy equilibrium is reached. Since the universe is a closed system, most scientists believe that it will eventually reach maximum entropy. This is generally referred to as the "heat death" of the universe.

Methods and Calculations

To calculate how much time will pass before this occurs, we first calculated how long it takes for an average office desk to reach maximum entropy.¹ An informal poll of ten research assistants at MIT's Research Laboratory of Electronics, all of whom possess office desks, revealed that the average desk reaches maximum disorder an average of 3.27 weeks after being cleaned.² (See Table 1.)

The size of the observable universe is 1×10^{24} square miles.³ The size of the average desk in our survey was 15.2 square feet. From this we can calculate that the observable universe contains 1.8×10^{30} desks. With each



Table 1 Results of the Desk Survey

Respondent no.	Desk size (sq. ft.)	Time to maximum entropy (weeks)
1	15.0	3.0
2	14.8	3.5
3	14.8	2.2
4	15.1	2.5
5	15.2	4.3
6	15.0	4.0
7	15.5	3.4
8	15.8	5.2
9	15.6	1.3
10	15.2	N.A.

desk taking 3.27 weeks to achieve maximum entropy, we can calculate that the universe will take $(1.8 \times 10^{30}) \times 3.27$, or 5.9×10^{30} weeks. This equals 1.1×10^{29} years.⁴

Conclusions

The impending heat death of the universe is much too far away in the future for us to worry about. Therefore it is permissible for office workers to let their desks get messy.

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- Resnick, Robert, and Halliday, David, *Physics*. New York: John Wiley and Sons, 1977.

Notes

1. A desk has reached maximum entropy when it needs to be cleaned up again.
2. One of the people polled maintains that his desk is always orderly. He has obviously found a way to counteract entropy but refuses to discuss his method until the patent comes through.
3. We did not include the unobservable universe in our calculations, since we have no proof that it exists.
4. We did not take the expansion of the universe into account in our calculations because we did not wish to do the extra mathematics.

JIR Recommends

Articles, books, and other communications that merit your attention.



Compiled by Stephen Drew and Norman D. Stevens

"Worms in Space," by G. Nelson, W. Schubert, G. Kazarians, G. Richards, B. Stokes-Whittall, D. Whittall, E. V. Benton, E. R. Benton, and R. Henke, in *The Worm Breeder's Gazette*, vol. 12, no. 2, Jan. 1, 1992. The paper describes an experiment in which specimens of the worm *C. elegans* are carried as passengers aboard the NASA space shuttle. The experiment is designed to investigate the effects of cosmic rays with respect to mutation and the effects of gravity with respect to development and meiosis. Subscriptions to *The Worm Breeder's Gazette* may be obtained by contacting: Bob Herman, Department of Genetics and Cell Biology, 250 Biological Sciences Center, University of Minnesota, St. Paul, MN 55108-1095.

(Thanks to Carl Johnson for bringing this to our attention.)

"Rectal Suppository: Commonsense and Mode of Insertion," by K. H. Abd-El-Maeboud, T. El-Naggar, E. M. M. El-Hawi, S. A. R. Mahmoud and S. Abd-El-Hay, in *The Lancet*, vol. 338, Sept. 28, 1991, pp. 798-800. The authors delve into this subject with tenacious curiosity: "Although most pharmaceutical textbooks agree that the torpedo-shaped suppository is the best form, none has mentioned frankly with which end a suppository should be inserted foremost." The paper presents an iconoclastic conclusion: "The designer of the 'torpedo-shaped' suppository suggested its insertion with apex foremost. Our data suggest that a suppository is better inserted with the base foremost." (Thanks to Jon Schmidt for bringing this to our attention.)

Windows of Light: Using Quartz Crystals as Tools for Self-Transformation, by Dr. Randall N. Baer and Vicki V. Baer, 1991, Harper & Row. According to the publisher, this work combines "the wisdom of the ancients with current scientific knowledge" and "goes a step beyond into the realms of Divine Science, advanced healing techniques, multiple-crystal gridwork systems, computer-like programming applications, and more."

(Thanks to John French for bringing this to our attention. French speculates that quartz crystals might some day make very accurate electronic oscillators.)

What Bird Did That? A Driver's Guide to Some Common Birds of North America, by Peter Hansard and Burton Silver, 1991, Ten Speed Press, P.O. Box 7123, Berkeley, CA 94707. This carefully organized and well-illustrated volume breaks new ground in its efforts to assist automobile drivers to identify the bird droppings left on their windshields. From its copyright notice to its bibliography, which includes a citation of C. Darwin's classic *On the Origin of Feces*, this is a testimony to the bounds to which scientific research can be carried in meeting the practical needs of contemporary society.

Measuring the Snail's Pace

Zoltán Donkó

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**The speed of
the snail is
simply
proportional to
the frequency
of the detector
signal**

Laser Doppler velocimetry (LVD) has become a popular method for measuring velocity. In this paper the results of an experiment are presented in which the speed of a snail (*Helix pomatia*) has been measured.

Experiment

The experimental arrangement is shown in Figure 1. The beam of a 25-mW He-Ne laser was split into two parallel beams of equal intensity, and these coherent beams were focused onto the shell of a snail, where they formed a common cross-section (see also Figure 2). The monochromatic illuminating

beams propagating in the directions defined by the $\mathbf{k}_1$ and $\mathbf{k}_2$ wave number vectors can be represented by the following wave functions:

$$\Psi_1(\vec{r}, t) = \Psi_0 \exp \{i(\omega t - \vec{k}_1 \vec{r})\} \quad (1)$$

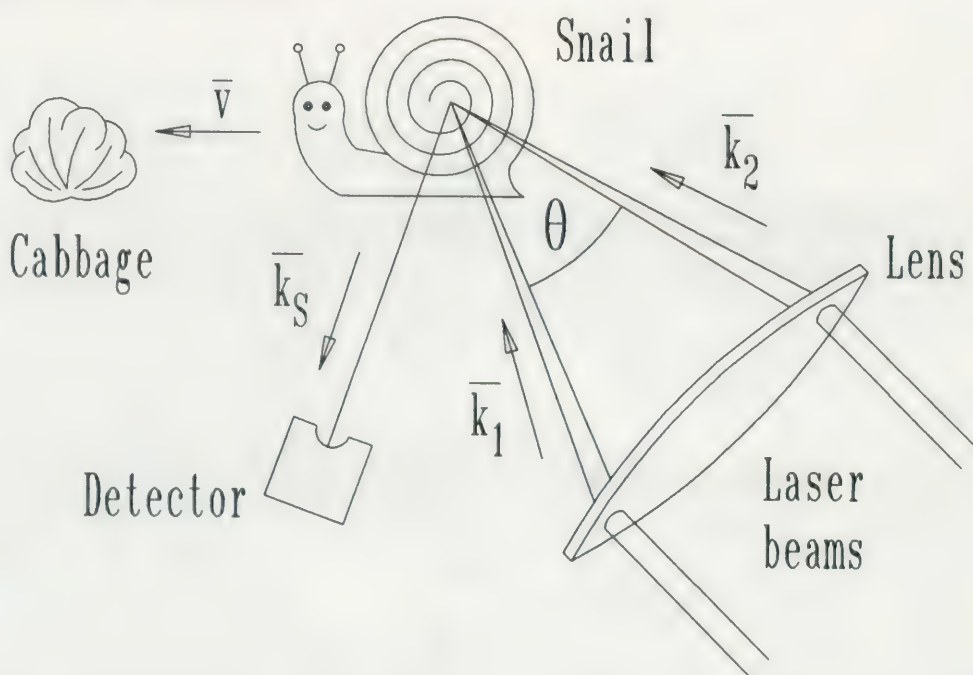
$$\Psi_2(\vec{r}, t) = \Psi_0 \exp \{i(\omega t - \vec{k}_2 \vec{r})\} \quad (2)$$

Both the Ψ_1 and the Ψ_2 light waves are scattered from the snail's shell and have a component propagating in the direction of $\vec{k}_s$ (see Figure 1). If the snail is moving, the scattered waves contain different Doppler shifts because the $(\vec{v}, \vec{k}_1)$ and $(\vec{v}, \vec{k}_2)$ angles are usually not equal.

It can be shown that

- it is the difference of the Doppler shifts

Figure 1 Experimental arrangement



that appears in the signal of the detector and

- the angular frequency (Ω) of this signal is given by

$$\Omega = (\bar{\mathbf{k}}_1 - \bar{\mathbf{k}}_2) \cdot \bar{\mathbf{v}} \quad (3)$$

Ω does not depend on the position of the detector. On the other hand, the magnitude of $\bar{\mathbf{v}}$ can be determined only if we ensure that $\bar{\mathbf{v}}$ is parallel to $\bar{\mathbf{k}}_1 - \bar{\mathbf{k}}_2$. In the experiment, this was done by stabilizing the direction of the snail's velocity vector ($\bar{\mathbf{v}}$) using a piece of cabbage, which is one of the snails' favorite foods and which they can smell from a distance of at least 10–20 cm.¹

Using equation (3), the speed of the snail is simply proportional to the frequency ($f = \Omega/2\pi$) of the detector signal:

$$v = \frac{\lambda}{2 \cdot \sin(\Theta/2)} f \quad (4)$$

where Θ is the angle between the illuminating beams (see Figure 1) and λ is the wavelength of the laser ($|\bar{\mathbf{k}}_1| = |\bar{\mathbf{k}}_2| = 2\pi/\lambda$).

Using the values $\lambda = 623.8$ nm and $\Theta = 0.55$ rad and substituting the numerical factor into equation (4), we have

$$v_{[\text{mm/sec}]} = 1.17 \times 10^3_{[\text{mm}]} \cdot f_{[\text{1/sec}]} \quad (5)$$

The signal of the detector was fed to a transient recorder and plotted by an XY writer.

Results

Figures 3a–3c show some samples of the detector signal. A 100-Hz reference signal is also recorded and shown in Figure 3d.

The data obtained from the measurements indicate that

- the speed of the snail may change considerably: the measured velocity ranges from 0.06 mm/s (Figure 3a) to 0.18 mm/s (Figure 3b); the average velocity is approximately 0.1 mm/s;
- owing to the variable reflection of the shell's surface, there are changes in the amplitude of the Doppler signal (see Figure 3c);
- the movement of the snail, although slow, is not steady. Even some quasi-periodic structure can be seen in Figure 3b.



Figure 2 The snail illuminated by the laser beams

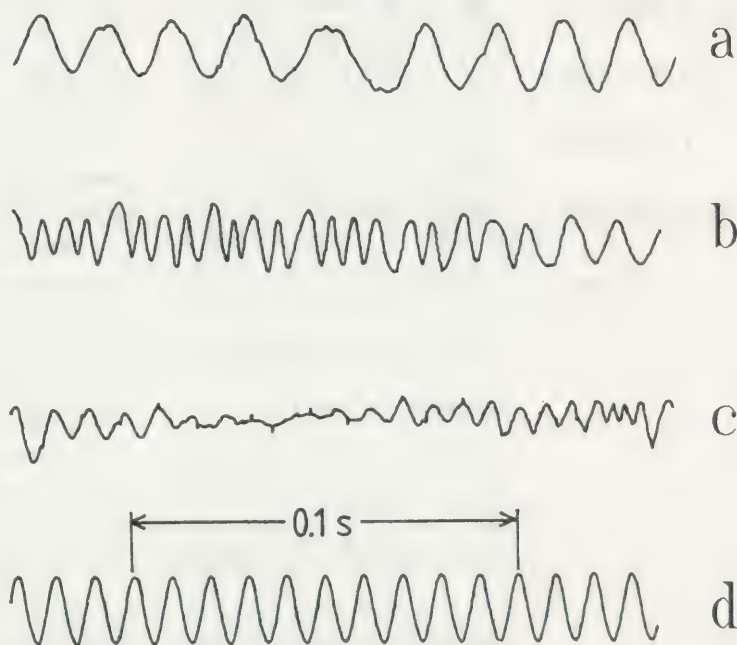


Figure 3 (a–c) Recorded Doppler signals and (d) $f = 100$ Hz reference signal

Acknowledgments

The help of Ms. T.J. Forgács and Dr. M. Jánossy is gratefully acknowledged.

Reference

1. Brehm, A.E. *Brehms Tierleben*. Urania Verlag, 1956.

Elegant Results

by Alice Shirell Kaswell



I strive, in this regular column, to keep a gentle finger on the pulse of multidisciplinary research — to be an independent scientific observer in the realms of theoretical and applied cosmetology, diet, hair, nails, gastroenterology (especially motility), psychology, tensor analysis, HVAC engineering, health guidance, and fluid mechanics.

**It's unnatural
for a woman
to go out and
try to kill
someone for
sport**

One should always check the caliber and condition of ammunition before loading the firearm, according to a report on page 2 of vol. 3, no. 6 (July/August 1991) of the research journal **Women and Guns**. The same report finds that polymer technology is the technology of the 21st century and that Glock was busy perfecting it.

Ultimate Making-Up

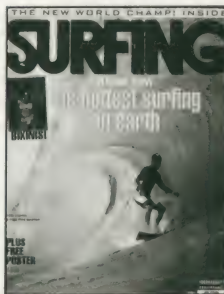
Women and Guns staff investigator Sonny Jones analyzes (pp. 6-7) the mathematical dispute concerning Yeager's

six-to-one ratio of the number of handgun accidents to the number of intruders killed. The crux of Jones's argument is Second Amendment Foundation research director Talcott J. Franklin's report of sociologist James Wright's finding that the Yeager ratio is "The ultimate in making up a number." . . . A research report on page 7 presents the Davis Lifetime Warranty: "If anything goes wrong with a Davis firearm, we will service or replace it free for the lifetime of the user." In the event that the firearm goes very wrong and terminates the life

of the user, the warranty is presumably rendered null and void; however, this point is not explored in depth.

Hot Pursuit, Hermaphrodite Champ

Women and Guns investigator Robin Taylor describes (pp. 12-13) how researcher Tracie Pertuit was hotly pursued by Lucinda Sexton with a 360 and by West Point's Jeannine Kruger with a 358. . . . Taylor also makes a remarkable discovery about gender: in the Female Intercollegiate Pistol Championships, Chris Alvarez took his Feinwerk-



bau Model 2 to victory again.

Creative Revenge

Investigator Lyn Bates and her colleagues developed the technique of saying loudly, "Women's self-protection!" as they thrust flyers at research subjects in Harvard Square. Bates reports that almost 80% of the female subjects did a double-take. Another unexpected finding was that everyone who stopped to talk was interested in Cap-Stun. Details of the study are presented on pp. 20-22. . . . This issue of *Women and Guns* also contains a comprehensive literature review (page 29) for areas at the forefront of research activity concerning women and guns. The areas include covert sciences, government auctions, creative revenge, fake ID, and explosives.



Malt-Nut and the Anaerobic Threshold

Biology and biotechnology have seen truly amazing advances during the latter part of this century. Nowhere is this more apparent than in the case of a woman who is powered by PowerBar in three delicious flavors (Malt-Nut, Chocolate, and Wild Berry). Details are presented in a report on p. 12 of vol. 12, no. 5 (February 1992) of the research journal *Volleyball Monthly*. . . . Two universities have been performing intensive research concerning the anaerobic threshold of human beings and its relationship to the Spaulding weighted SportRope, according to a report on p. 28.

Three Leg Guys

Volleyball Monthly also contains a seminal research paper (p. 32) concerning a rather arcane aspect of shoe science that is drawing considerable attention: GEL-CRUSHER. The paper explores not only GEL-CRUSHER HI, but also GEL-CRUSHER LO and GEL-ATTITUDE. Surprisingly, GEL-CRUSHER HI and GEL-CRUSHER LO feature GEL in the forefoot only. . . . A brief item on page 82 re-

ports, without comment, that three leg guys result in superior net tension.

Kooks and Hot Guys

Investigator Sam George reminds us that, in any society, a total lack of a pecking order is unnatural. George finds that the kooks outnumber the hot guys ten to one, and that without those few hot guys trying to hog all the waves, there wouldn't be any bad vibes. George's full report appears on page 12 of the April 1992 issue of the research journal *Surfing*.

Unobtainium, Gurgling

Unobtainium is a component of Oakley sport sunglasses. Unobtainium has a unique, mildly hydrophilic quality that gives it a highly effective "stickiness." There is evidence that the more you perspire, the more Unobtainium sticks to your skin. This alarming finding appears in *Surfing's* report on page 39. . . . The Brazilian cheer squad went nuts when Fabio peeped into the lead with a three-footer which he milked for an eternity as it gurgled over Val's Reef. Details are contained in investigator Bill Sharp's paper on pp. 70-71.



Serve God! and Surf!

A research paper entitled "Serve God! and Surf!" appears on page 93 of the same journal. It clarifies the sociological underpinnings of a missionary training school and surf camp. . . . On the same page, there is a summary presentation of the most recent data concerning

Turbo "Speedstik" Paipo with Stick On Top Pads and Amazing Turbonite Plastic Core. . . . 15-year-old wonder grommet David Chambers is depicted photographically on page 97. . . . On page 112 there is a technical report outlining the procedure for Ding Repair Plus, especially those aspects that allow one to mold a nose or fix a fin.

Face View of a Mouse Optic Nerve



An unusual arrangement of smooth endoplasmic reticulum of mouse optic nerve. Bar = 50 μ m. 305,00x.

Photomicrograph: Betsy Ott, Dept. of Biology, Tyler Junior College, and James R. Stewart, Dept. of Biology, University of Texas at Tyler.

Unnatural for a Woman

Investigator George Dillman put years of work and study into his exhaustive report of cavity strikes, nerve attacks and a curious phenomenon known as "tuite real secrets." An abridged version of Dillman's work appears in vol. 30, no. 2 (March 1992) of the research journal *Black Belt*. . . . Kickboxing sensation Kathy Long is widely acknowledged as the most talented female full-contact fighter in the United States, but would she be a match for a male fighter? Investigator Bill Wallace explores this question in a treatise that appears on page 12. Wallace concludes that it's unnatural for a woman to go out and try to kill someone for sport.



Baby Cart Bloodfest

Black Belt's literature review on pages 42-43 includes references to current research work on killer meteors, devil's dynamite, drunken fist boxing, Yes Madam, Master of Flying Guillotine, and Baby Cart Bloodfest. . . . The Ultimate Leg Stretching Machine is described on page 89. . . . The question "Can you hit a man 11 times in one second?" is finally addressed on page 98. It is accompanied by what may be the definitive assessment of Wing Chun Wooden Dummy.

Meet the Inventor

A brief, intimate visit with a mother or father of invention

Antonia Chalfont Wu, Ph.D.

Frank Patterson, the Playtex Nipple Man

Frank Patterson designed an improved version of the Playtex™ nurser and pacifier nipple. Over the past decade, Patterson's nipple has been used by millions of infants around the world. We spoke at his home in Exeter, New Hampshire.

What was your inspiration for inventing the Playtex nipple?

Sometimes inspiration is spurred by fulfilling certain job requirements with an imposed deadline. Such was the situation with the most recent design of the nipple.

How long did it take you to perfect the invention?

The most recent design adaptation of the nipple to a milk dispenser was 80% optimized after two years of testing. Additional tweaking probably took another two years.

What unexpected difficulties did you encounter?

We watched for problems when hungry babies would exert their pulling, twisting, and yanking activities on the nipple during usage. Certain babies demonstrated the strength of their oral suction and compression by pulling the milk container off the nipple. Duplicating this type of failure mode among the engineering staff was handy for testing design changes. I don't think passing scientists from other departments could fully appreciate the discoveries being sought by engineers suckling nurser nipples and imitating infant nursing antics.

Did you test it on yourself?

I munched a cross-linked natural rubber version before and after an aging test, or when it was hot out of a new mold.



What are you working on now?

For the past ten years I've worked on intravascular blood gas sensors. In my spare time I invent toys. One device, a compressed air-powered mortar charged by a bicycle pump, has turned out to be a surprisingly efficient means of propelling various objects into a flight path. One can exchange parcels with distant neighbors or practice catching pop flies, for example.

Do you have any advice for aspiring young inventors?

Find a specialty you have a passion for and stick with it. Pigheadedness will come in handy for the long haul, but keep an open mind. Be capable of easily switching to the thoughts of others by listening and questioning with an open mind. Inventing involves our unique interpretation of the knowledge of others.

One can
exchange
parcels with
distant
neighbors or
practice
catching pop
flies

Solution to Last Issue's Puzzler

Many readers have written to complain that this puzzler was too difficult. In fact, the solution is simple.

The high energy physics research paper (*Search for Lepton Flavour Violation in Z^0 Decays*) has a total of 185 co-authors.

Their names are listed alphabetically.

To identify the authority figure, carefully examine the co-authors' names.

With one exception, each individual is identified by first initial(s) and last name.

That exception is Samuel C. C. Ting.

Thus it is easy to see that the authority figure is Samuel C. C. Ting.



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In Memoriam:

Howard J. Brannd, the Father of Psychoterminology

Abstruse communication has had no more generous friend in this century than Howard J. Brannd. Brannd gave new words to a field that was starved for vocabulary. It was he who brought technical jargon from the world of electrical appliance repair to the field of mental health therapy.

Howard Brannd was an accomplished repair technician who specialized in fixing radios and, with the dawning of a new electronics age in the late 1940s, televisions. He came into contact with the world of psychotherapy during his first stay in a convalescent rest home. The visit was occasioned by a bout with mental exhaustion, an ailment that would continue to plague Brannd throughout his adult life.

In discussions with psychologists and psychiatrists, Brannd found that his electronics terminology could be readily adopted into

the language of psychotherapy.

"Process," "compatibility," "resonance," "deflection," "differentiation," "overloaded," "scanning," "resolution," "saturation," "ghosts," "shadow," "mask"—these terms all migrated unchanged, except for their meanings, from the mouth of the humble TV repairman to the tongues of ten thousand therapists.

Other terms suffered some alteration in the journey. "Synchronization" became "synchronicity." "Negative transmission," a television concept in which white rather than black decreases the amplitude of the AM picture carrier signal, became "negative transference," a psychotherapy concept that takes considerably more time and space to explain. "Antenna orientation" was transformed into the simpler "orientation" and acquired sexual overtones.

In his later years, Brannd nurtured his love for capacitors, induction coils, resistors, rheostats, and RCA vacuum tubes. He spent much time creating pastel and watercolor murals depicting the inner lives of his favorite electronic components. Many of these paintings grace the walls of the Jimson Memorial Hospital, where he resided from June 1957 until his passing last month.

*He brought
technical
jargon from
the world of
electrical
appliance
repair to the
field of mental
health
therapy*



Letters to the Editor



*Overly stimulating letters from
overly stimulated readers*

***I am mounting
an expedition
to find the lost
borough of
Brooklyn***

The Syphilitic Brick

Sir:

It was interesting to see Dr. Ruthifer Karron's report on infectious diseases in bricks (JIR 37:1). Dr. Karron's tantalizing findings are similar to those obtained by Jahre, Myers, Cordeiro, DeRosa, and Rivera at Harvard in the mid-1970s. It would be instructive if Dr. Karron were to publish a case study of the brick that contracted syphilis.

Jack Moran
New York City, New York

Seeks Mythical Lands

To the Editor:

I am mounting an expedition to find the lost borough of Brooklyn. I would appreciate hearing from anyone who has evidence that might bear on the question of its location.

Dr. Paulsin Ledmor
Institute of Historical
Geographic Research
Vilnius, Lithuania

Past Is Prelude

Dear Sir:

This is in reference to my earlier communication concerning the discovery of incontrovertible proof that the world ended early in June 1952. Please be advised that I have found an error

in the calculations. The correct year is 1992. Details to follow.

Gary D. Miller
Simmi Valley, California

Pride of Authorship

Gentlemen:

This is my third attempt at getting into your journal. If you don't accept it on its merits, accept it out of pity.

David Goteiner, DDS
Chester, New Jersey

Irreproducible Pages

To the Editor:

As a subscriber, I received vol. 36, no. 2 of the Journal. The front page shows a picture of a man with open mouth, and the caption says "an Irreproducible Result (see page 38)," but there is no page 38. The last page is page 32. What happened to the remaining six pages?

F.K. Mostofi, M.D.
Armed Forces Institute of
Pathology
Washington, DC

Surface Experience

To the Editor:

Earle Spamer suggests a novel solution to the problem of Grand Canyon erosion ("Preserving the Grand Canyon," JIR 36:5). Spamer would fill the Canyon with styrofoam piffles. This reviewer, however, pro-

poses to paint the uppermost layers of piffle to represent the pristine canyon that lies beneath. This is the logical extension of going to Italy to see a plaster cast of Michelangelo's David while the real one stays inside, under wraps, away from the ravages of acid rain. A visit to the canyon would then be an experience in postmodern nature appreciation, one sure to be remembered by the entire family for years to come.

R.P. Thropmorton IV
Bar Harbor and Kews

Genius Jibber Jabber

Mister Editor:

Don't you have anything better to do with your time than jibber jabber with hoitsy toitsy Nobel Laureates about things they ought to keep private if they had any sense like a normal brained person? I could care less than less about that Henry Kendell [sic] whistles while he works ("Nobel Thoughts: Henry Kendall," JIR 37:1), and looking at his doodles is plain a waste of time and my hard-earned money. And what does he mean when he says, "but my experience does not constitute an adequate base for advising young people at the present time." And that doctor who never takes baths ("Nobel Thoughts: Stanley Cohen," JIR 36:6) is really a piece of work. They used to give you a Nobel

Prize for being a genius like Henry Ford or Albert Lindbergh. My, how times have changed.

Allen T. Fressland
Upper Saddle River
New Jersey

High Flyer Replies

To the Editor:

I must reply to the charges lodged against me by one of your readers, Anton Levoisier Munch (Letters, JIR 37:2), concerning my report ("The Mating Habits of the Rust-Spotted Mid-Pacific Tyrolean Egret," JIR 37:1), which described how I suspended myself from a kite for twelve days to observe the behavior of birds that are notoriously averse to contact with human beings.

The egrets I was studying nest in areas near a Fakunaouounan village in which kite flying has been conducted in connection with the local puberty ritu-

als for countless generations. The Fakunaouounans in their kites and the egrets in their nests have been co-existing harmoniously for a long, long time. I trust this puts the matter to rest.

Greta Munch, Ph.D.
Headlands University
Woody Harbor, New Zealand

Subatomic Surprise

Sirs:

I enjoyed the free quarks that were included in your September issue. They were a charming surprise.

F. N. Dal
Raipur, India

Dilemma for the Ages

Dear Sir:

I hope you can help me resolve a dilemma. Last fall I received a letter from the government's Office of Scientific Integrity (OSI) asking me

to fill out and file their form by January 15. Being busy and preoccupied as I always am, I forgot about it until January 25, when it resurfaced from the vasty paper depths of my desk top. I then backdated the form, reset the postage meter to read January 15, and mailed the form to OSI. Did I commit a breach of scientific integrity? I am having trouble sleeping and await your reply.

Bhupendra Goldschlag, Ph.D.
The Becker Laboratories
Winningham, Colorado

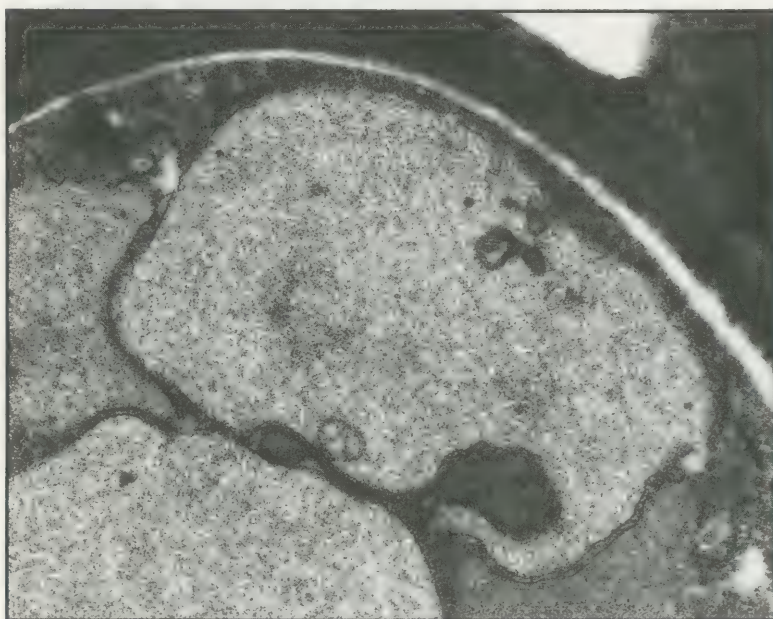
Consult a Physician

Dear JIR:

William Hsiah's remarks about vitamin C and stucco ("The Biochemistry of Tile Grout," JIR 37:1) might leave some readers with the mistaken impression that tile grout is useful in the prevention and treatment of the common cold.



Elephant-Shaped Membrane-Bound Vesicles in *Sclerotinia sclerotiorum*



Electron micrograph of protein bodies within a cell of a sclerotium of the plant pathogenic fungus *Sclerotinia sclerotiorum*.

Photomicrograph by M. Mould and G.J. Boland, University of Guelph, Guelph, Ontario.

My laboratory has been investigating the dietary use of industrial cements, glues, grouts, putties, mortars, and plasters for many years. We have discovered that most of these substances, tasty as they are, provide little or no benefit when administered orally. I urge anyone who is planning to add these items to his or her diet to first consult a physician.

Ronsard L. MacDonald, M.D., Ph.D.
Director, The Institute of Rapid Food Technology
Pimento, California

Food: Fur Thought

To the Editor:

The brief history of fur that accompanied William Hsiah's extremely long research report ("The Biochemistry of Tile Grout," JIR 37:1) was incomplete. Nowhere did it mention the important contributions to knowledge made by my father, Dr. Salisbury Titcomb, Sr., during the 1930s and 1940s.

Dr. Salisbury Titcomb, Jr.
Anopheles, Maryland

Cherchez la 2,5-Di-hydroxy-diethylterephthalate

Sir:

There was an error on page 12 of your January issue in the discussion of the steric repulsion of the bromine atoms for the ethoxy groups ("The Biochemistry of Tile Grout," JIR 37:1). The accompanying effects are due to the fact that 2,5-dihydroxydiethylterephthalate contains strong hydrogen bonds. There's no mystery about that.

Arlene Spector
Narberth, Ontario

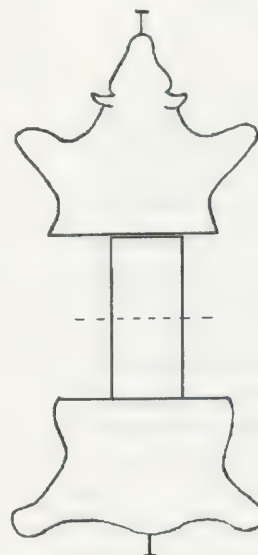
Winsorized Sheep

Dear Editor:

While reviewing an article for an in-house editorial committee, I came upon the following sentence: "Due to excessive weight gain one sheep had to be Winsorized." I telephoned the senior scientist, read the sentence, and stated that the Animal Ethics Committee would probably not approve of "Winsorizing" sheep. Later the same day, I found the attached approval sheet from the Chairman of the Animal Ethics Committee on my

desk. I really hate it when they tear the interquartile range out of a lamb.

Dr. P.L. Risdon
Research-Statistical Consultant
Ministry of Agriculture and Fisheries
Wallaceville Animal Research Centre
Upper Hutt, New Zealand



A Winsorized Sheep

Not a Leap Year

Dear Editor:

On page 1703 of the July/August 1991 issue of your otherwise highly accurate publication, you have made a grievous error. Please note that the cosmological constant was last adjusted on February 30, 1967. Your error may be due to the fact that this was not a leap year.

The constant is given by the equation

$$c = k (6.6 \times 10^{-34})$$

The value of k is, of course, determined empirically in our laboratories.

Also, I note with regret that your pagination is off. Pages xxxii to xxiv are missing from my last issue. Kindly send them forthwith.

S.A. Rudin
National Bureau of Parameters
Lima, Ohio

Information for Contributors

The **Journal of Irreproducible Results** publishes original articles, news of particularly egregious scientific results, and short notices of satiric and humorous intent. The editors look forward to receiving your manuscripts, photographs, X-rays, drawings, etc. Please do not send biological samples. Reports of research *results*, modest or otherwise, are preferred to speculative proposals.

Submission of a manuscript implies that it is previously unpublished. Other material must be accompanied by an indication of source. All accepted manuscripts become the property of the Publisher.

The entire manuscript should be typed double-spaced on standard white bond paper, with generous margins all around, and submitted with a photocopy. Manuscripts lost in transit will not be published.

All illustrations should be submitted ready for press. The Publisher does not redraw artwork. Line art is preferred to tone; whenever possible, please submit originals, not Xeroxes.

Because of high volume and low staffing, submissions cannot be acknowledged unless accompanied by a self-addressed, adequately stamped envelope.

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